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ABSTRACT

The Instructional Support System for Occupational Education (ISSOE) Instructional Planning Project was intended to develop procedures for identifying successful instructional materials, suitable for teaching specific ISSOE competencies. A form was developed for use by teachers in reporting materials they were using in their classes with success. Two workshops were held at which teachers were trained to evaluate instructional materials using the form developed. Resources guides were also compiled that contained pertinent information on teacher-identified curriculum products, teaching strategy, and existing evidence of successful alternative applications. A retrieval system was then developed for use in accessing basic academic skill and technical skill materials for vocational education. Articulation with related ISSOE projects centered around sharing of project staff, integration of activities with field test and dissemination activities, and coordination of presentations regarding ISSOE projects. The project was evaluated by an informal project review committee, the ISSOE Coordination Committee, and workshop participants who provided feedback. (Appendixes, amounting to over one-half of the report, include the Instructional Materials Reporting Form, Retrieval System Coding Forms, and Retrieval Systems User's Guide.) (YLB)

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ISSOE

Managing Student Progress

Instructional Planning

Final Report

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Instructional Planning

Final Report

Robert Frank

Research Pub. 81-05
September, 1981

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ACKNOWLEDGEMENTS

Several individuals at the Cornell Institute for Occupational Eduation participated in this project. Dr. Vernon Beuke drafted the original proposal which led to the project's funding and supervised project fiscal matters. Dr. Robert Frank directed the project. Dr. John Bowers coordinated the preparation of the materials reporting forms, and Dr. Peter Gray developed the retrieval system. He, and Dr. Robert Frank designed the user's guide for the retrieval system. Dr. Frank prepared this final report.

Many individuals thoughout New York State assisted with this project. Special thanks are extended to Mr. Joseph Valletta and Mr. David Robin, ISSOE Regional Coordinators, for their assistance in scheduling workshops related to project activities. Thanks also must be offered to the many occupational education teachers in New York who submitted the instructional materials reporting forms. Finally, appreciation must be given to the many individuals at the New York State Education Department who provided insight and guidance for the project.

James A Dunn
Institute Director and
Professor of Education

PART I

INTRODUCTION

For several years, staff at the Cornell Institute for Occupational Education have been conducting research aimed at improving the student guidance and planning components for the Instructional Support System for Occupational Education (ISSOE) for New York State. This project was directed toward developing techniques for evaluation and identification of instructional materials that were compatible with competency based vocational education programs.

Previously, a score of modularized, competency based curricula had been developed. Each was composed of:

- a major task-related objective;
- a series of "enabling" objectives;
- a criterion reference measure to evaluate pupils' progress;
- the development of methods for individualizing programs;
- a system for monitoring and reporting student progress.

The rationale behind ISSOE's resource development strategy is well founded. One must first know what is to be done before becoming concerned with how to do it. The ISSOE curriculum provides an orderly sequencing of expected outcomes leading to entry-level competencies in a chosen field of study. The present phase of research was intended to supplement this curriculum work through the development of procedures for the identification of successful instructional materials.

For the past five years, those involved with the implementation, organization and management of ISSOE have received requests from occupational education teachers for assistance in identifying instructional materials and resources, suitable for teaching specific ISSOE competencies. Teachers cooperating in the development and implementation of ISSOE needed assistance and training in the identification, review, codification and evaluation of basic instructional materials, alternative and supplementary resource materials, and teaching strategies, appropriate for specific curricula and modules. It was further recognized that mechanisms for diffusion of such information needed to be explored, tested and refined. First, a format had to be developed for evaluating and reporting on materials which had met with success in ISSOE. Second, there was a need for the identification, review, evaluation and classification of ISSOE instructional materials. Those instructional materials that had met with the greatest success and were deemed most compatible with ISSOE were then identified and catalogued. A computer based instructional materials retrieval system also was developed to assist in the identification of both technical and basic skills instructional materials.

This report reviews the activities of the ISSOE Instructional Planning Project (VEA 80-3A-1115GS). The major activities and evaluation of the project are summarized, and a description of project outcomes is provided. Attachments, including copies of actual project materials are included to assist the reader.

PART II

PROJECT ACTIVITIES

The objectives of this project focused on seven broad research areas. They were:

1. Develop a model of educational product information and acquisition, utilizing major sources of research, development and evaluation of instructional products and processes.

2. Develop and field test a model of teacher-initiated information seeking/searching behavior.

3. Develop a simplified form for teachers to use wherein they may summarize and evaluate various instructional methods currently in use in the ISSOE program.

4. Train a cadre of occupational teachers to apply the information assessing/up-to-date model to their specific disciplinary and informational needs, and to utilize the materials and methods of individualization developed in the first phase of this research.

5. Compile resource guides containing pertinent information on teacher-identified curriculum products, teaching strategy, and existing evidence of successful alternative applications.

6. Establish an attractive, computer supported instructional materials identification system. The system will be compatible with APPLE II computers (and if possible, with Xerox 860 word processing). The instructional materials identification system will be a terminal interactive system. A coding scheme will be developed for the coding of material by topic area. Approximately twenty items of materials representing basic academic as well as technical skills will be coded for a particular concept (i.e., addition of fractions, use of commas, etc.) to test the system. A user's manual will be developed, and copies of the manual and debugged "floppy disc" programs will then be made available for duplication and local use.

7. Articulate the ISSOE Instructional Planning Project with the ongoing statewide ISSOE program and its many cooperating institutions.

An extensive review of the literature regarding instructional materials evaluation procedures was conducted early in the project. Because of a lack of promise for finding current solutions for Objectives 1 and 2,, those objectives were deleted from the project. A brief description of the steps which led to the decision to delete those objectives is, however, included.

Objectives 1 and 2:
Develop/Field Test a Model of Information Acquisition

An extensive literature search and review was conducted to identify models of educational product information and acquisition. It was found that there were few mode s available for evaluating educational products. Those that were available all tended to be based upon simple decision making, involving characteristics such as needs assessment, analysis of options, pilot testing, review and final evaluation.

At SED request, further activities along the line of Objective 1 were terminated in March, 1980. Since the decision was reached not to develop a model, Objective 2, requiring field testing of the model, was also terminated. Both these decisions were made at the request of, and after extensive consultation with, the SED ISSOE Unit, and after it was deemed most appropriate to direct project activities along the lines of the remaining objectives.

Objectives 3 and 4:
Develop a Reporting Form/Train Teachers

In order to maximize the effectiveness of the ISSOE system, a technique was needed for teachers to report materials which they were using in their classes with success. It was desirable to catalogue such materials. If this information were shared, it would assist in the individualization of instruction in occupational education programs. The underlying philosophical foundation is that every task in ISSOE can be taught successfully, and probably is or has been taught successfully, to every type of student somewhere in the state. The intent of this objective was to develop a form whereby one could extract from teachers the names of the materials used to teach a particular task to each type of student.

The development of a form to be used for reporting successful materials should have been as a rather easy task. After considerable discussions with New York State occupational education teachers, however, it was discovered that they greatly resisted another ISSOE form that had been mandated to them for completion. Their feeling was that the development of the form should be generated by occupational teachers themselves, since it had to be applicable to two different needs. They proposed that the forms should meet the following needs:

1. The forms should be easy to complete.
2. The forms should also be of value to a teacher examining a series of them in order to identify preferred instructional materials.

The development of a simplified form for teachers to use to summarize and evaluate instructional materials was tied to a set of workshops aimed at assisting teachers in evaluating instructional materials. These two workshops were held during the summer of 1980.

The first workshop was held on June 7, 1980 at the Sheraton Inn in Ithaca, New York. Attendance was restricted to occupational education teachers from Region 9. The workshop was jointly sponsored by the Institute and by the ISSOE Regional Coordinator for Region 9, Mr. Joseph Valletta. Approximately 30 teachers, representing nine different vocational training areas, attended the workshop.

The morning of the workshop was spent instructing teachers in techniques to be used for evaluation of instructional materials. That is, time was spent assisting them in identifying and understanding concepts such as sex-stereotyping, racial and ethnic bias, and readability. The readability information presented was related to the Degrees of Reading Power research presently being conducted by the State Education Department. The afternoon of the workshop also was spent along these lines, plus information was solicited from the teachers regarding the types of items that they would like to have included on an instructional materials reporting/evaluation form.

The second workshop was at the Broome-Delaware-Tioga BOCES in Binghamton, New York. This workshop was sponsored jointly by the project and the Regional Coordinator for Region 8, Mr. David Robin. Approximately 25 teachers attended, representing seven different occupational education areas. This workshop concentrated on the development of the simplified reporting form.

The morning session was entirely spent by teachers reviewing ten different material evaluation/reporting forms which had been developed by a variety of educational agencies throughout the country. Teachers were asked to go over each of the forms, extracting both the questions and format which they would prefer to have on a materials evaluation/reporting sheet.

After all the teachers had completed that task, they were paired up. Each pair was asked to compare their individual models, and jointly develop a single form for reporting and evaluating instructional materials. This phase of the activity stretched into the afternoon.

After all the pairs of teachers had developed a reporting form on which they agreed, they were joined into groups of three pairs each. The challenge to each of the groups was to develop one form upon which all six members could agree. It also was emphasized that "minority reports" would be accepted, since it was felt that every person should have the opportunity to voice his/her preferences, and that possibly, no one single form would emerge as applicable to all occupational program areas. As soon as the groups had completed their assignments, the forms were collected and compared. Each group was asked to orally describe its form and discuss its strengths, weaknesses and opposing viewpoints. That concluded the afternoon session of the workshop.

Research staff returned to the Institute and studied the various forms which had been developed as a result of the two workshops. It was found, surprisingly, that a high degree of commonality existed between the formats and choice of questions. The forms were merged into one ISSOE materials reporting form, a copy of which is included in this report as Appendix A. The development of that form completed the requirements of Objective 3 of this project. The completion of the workshop fulfilled the requirements of Objective 4.

Objective 5:
Compile Resource Guides

The completion of Objective 5 proved to be the most complicated and time consuming aspect of the whole project. Immediately upon the completion of Objective 3, Institute staff began the task of

separating and codifying the forms which had been supplied to the Institute by Mr. Peter Cooke of the State Education Department. (Mr. Cooke had, on July 26, 1980, supplied project staff with extensive lists of materials, reported by ISSOE teachers, at an earlier date, as being successful in ISSOE classrooms in New York State.) The materials were divided only by program area, and were not separated according to which forms could be valuable to the project in their present state. The project staff then had to sort the sheets into stacks, according to their utility to the project. The following general areas identified the activities undertaken for each program area:

- All the sheets for each program were first sorted by a staff member, then cross-checked by a different individual in order to determine which contained "usable" information. For instance, many teachers simply photocopied ISSOE catalogs and returned those sheets without indicating which instructional materials they used for the particular competency. Obviously, this failed to inform us of the support materials they were using. Other teachers reported that they had used a particular book for a whole module of tasks. Some sheets did not include the teacher's name or the tasks/competencies on which they were reporting. So, the staff's first task was to sort through the data provided by SED and discard those sheets deemed to be of no value to the project.

- Upon completion of this task, sheets were resorted according to their degree of usefulness to the project. For instance, some teachers reported that for a specific task they use specific materials. This was deemed to be the most beneficial type of information. Other teachers reported that for a series of tasks they use a particular material. And some of the teachers simply reported that for a whole course they use a particular material or resource. Therefore, the sheets were divided into three categories: one category was "task specific," another was "task general," and the third was "program general."

- Staff transferred the information from the earlier form to the form which had been developed as a result of the workshops (Objective 4). Many areas on the workshop-developed form were left blank, since that form asked

for more specific information than had been originally requested by SED staff. A cover sheet was then prepared and stapled to each pair of sheets, the two versions of each teacher's response. This cover sheet (Appendix B) was used in order to determine what additional information or follow-up was needed for each of the reporting forms. For the cover sheet, additional information was gathered from ISSOE catalogs, VTECS catalogs, etc.

- When CIOE staff felt that they had completed as much of the workshop-developed form as possible for a reported material, a new copy of the workshop form was typed. This was done so that teachers would receive a clean and neat form in the mail. The typed form was then clipped to the packet of previous forms (the cover sheet, workshop-developed form, and original reporting form).

- After all the forms were retyped, copies of the individual, typed forms then were separated from the package and repackaged to be sent to the respective Regional Coordinator. Each individual material reporting form which was to be mailed to a teacher had stapled to it a cover letter (Appendix C) prepared by CIOE staff, and a self-addressed business reply envelope to, hopefully, assure the return of the materials to the Institute. A cover letter to the Regional Coordinator (Appendix D) was prepared for each package, informing the Coordinator of his/her responsibilities. The packages were then mailed to the Coordinators.

Within a few weeks after mailing, forms began to be returned to the Institute. Some of the teachers had either moved or retired from teaching and were inaccessible. Others refused to participate, claiming that they had supplied this information or a facsimile to their coordinator some time earlier. After a few more days, however, completed forms began to arrive.

As the forms were returned, staff checked them for accuracy and completeness and logged them in on the charts which had been prepared for recording mailings. Forms were then paperclipped to the original typed copy and stacked together.

- In March, 1981, a typist was retained to type the additional teacher supplied material onto the original form. When this was completed, over two hundred completed forms, approximately 43% return rate, were available. Completed forms were then placed in folders according to program areas and arranged in task sequence within the folder. An assessment of the remaining forms was then conducted.

- A follow-up letter (Appendix E) was sent to the Coordinators in late April, 1981, asking them to encourage the teachers in their regions to send in reporting forms. A list of those teachers who still had not submitted forms was attached to the letter. This final mailing resulted in the return of over 271 additional forms. These forms were checked for accuracy; the information was typed onto the original forms as described previously. Thus, a return rate of over 85% was achieved.

- The forms were organized into resource catalogs by occupational areas (e.g., Agriculture, Trade and Industrial), with the sheets organized by program area (Agricultural Mechanization, Farm Production and Management, etc.) and by task number within each program. The breakdown for number of pages per catalog was:

  Distributive Education - 7 pages

  Home Economics Education - 98 pages (75-Child Care; 23-Food Trades)

  Business and Office Education - 151 pages

  Trade and Industrial Education - 188 pages (54-Automobile Mechanics; 45-Automobile Body Repairs; 5-Carpentry; 21-Cosmetology; 1-Electrical Trades; 16-Graphics; 46-Plumbing)

  Health Care Occupations - 27 pages (All Health Assisting)

  Catalogs were then delivered to the printer. This completed Objective 5.

The materials described in these catalogs do not purport to represent either exemplary or widely used materials. The materials included in these catalogs are only a small sample of what are actually being used. These catalogs reflect only those resources which were submitted to SED by ISSOE teachers in the field and which were described well enough to permit other occupational teachers to identify the material and its particular use.

These materials were included only to show how a materials retrieval system might function. And to illustrate problems and shortcomings of such a system, some of the materials were coded for entry into the technical skills system. Many of the individual tasks, however, contain information on only one resource, thus the value of the catalogs as general resource documents is somewhat minimized.

It is important to remember that it is the concept of instructional materials cataloging that was being pilot-tested during 1979-80. The objective was to study cataloging feasibility, not to develop finished catalogs. It was understood that all materials for all tasks could not and would not be cataloged in one year, nor even could all relevant and exemplary materials be identified. The role of the Institute at this time was only to assist in the production of the catalogs, in the exploration of production feasibility, not in the compilation of the full set of individual resource sheets or the development of the catalogs.

Objective 6:
Establish Retrieval System

The use of mini- and micro- computers in education has grown rapidly within the past five years. Educational researchers have found that the mini-computer can greatly enhance the versatility of instructional delivery systems, and can make giant strides forward in attempts to individualize educational programs.

Several major efforts have been directed at the use of mini-computers for retrieval systems in education. (A retrieval system is a computer supported system that has information about articles, books, etc., stored by code numbers, or a thesaurus, which makes retrieval of resources more efficient. ERIC is a large scale system

for educational research.) The thrust of Objective 6 was to develop a retrieval system which could be used for accessing basic academic skill and technical skill materials for vocational education. Emphasis was placed on the development of the software (the coding scheme and computer program), rather than the activity of coding a large number of materials. It was assumed that the materials could be coded at a later date; the coding obviously could not be done until the coding scheme was completed. The coding scheme would be useless until the computer program, which would access the materials, was operational.

The first step toward the establishment of such a system was to identify and review the one or two most promising retrieval systems presently in existence. The Annehurst Curriculum Classification System (ACCS - Kappa Delta Pi) was quickly identified as the most sophisticated and promising of systems available. ACCS had developed a coding scheme and thesaurus for mathematics, and was in the process of developing a related scheme for language arts. The producers of ACCS had developed retrieval systems compatible with main frame computers using PL-1 languages and also had a "floppy disc" program available for APPLE II computers.

ACCS sells its "floppy disc" program for the APPLE II. However, they do not allow their program to be duplicated and disseminated without payment of royalties. Since CIOE planned to share the retrieval system with occupational centers in New York State, ACCS software was out of the question. Further, their printouts of data provided a considerable amount of information which was considered unnecessary for this project.

The benefits which ACCS provided, however, were:

- the coding scheme and thesaurus,
- the knowledge that such a system could be prepared on both mini- and main frame systems, and
- a willingness to share information and discuss common problems.

Copies of the ACCS books and materials were purchased by CIOE as an aid in the development of the retrieval system.

Concurrently, CIOE was gathering a large collection of vocational education textbooks as part of the materials library for the "basic skills" project (Teaching Basic Skills Through Vocational Education, United States Department of Education Grant #300790744). These materials would provide examples whereby sections dealing with basic mathematics or language arts units could be identified, coded and included as samples in the retrieval system.

Finally, it was decided that the instructional materials sheets developed for this project (Objective 5) could also be included in the system. By using those sheets, the retrieval system would be able to identify materials which are effective in teaching both basic academic and technical skills to secondary vocational students.

The development of the retrieval system centered around four major activities: Softward Development, Systems Refinement, Records Develpment and User's Guide Production.

Software Development

An initial planning information session was held between the project director, Dr. Robert Frank, and Dr. Jason Millman, Professor of Education, Cornell University, to discuss the use of the

Department of Education's APPLE II computer for the establishment of the retrieval system. Following that session, Drs. Frank and Millman met with Dr. Peter Gray, Executive Project Director for the "basic skills" project, to refine the objectives and needs of the retrieval system. (Dr. Gray would serve as the primary program developer for the retrieval system.) Dr. Millman suggested a meeting with Dr. Robert Cooke, Director of Instruction for the College of Agriculture and Life Sciences at Cornell University, since Dr. Cooke was working with retrieval systems and could provide information as to the best software for our needs. That session was held on Thursday, June 18, 1981.

At the meeting, Dr. Cooke recommended a review of The Modificable Database software package available from Synergistics Software, Belleview, Washington, since that program most closely represented our needs. He loaned project staff his copy of the Modifiable Database for experimentation.

The software package worked extremely well for the project needs. Initial activities centered around the identificaiton of fields (columns or domains of information) for: (a) occupational education subject area; (b) basic skills content area; (c) instructional material title; (d) author's name; (e) publisher; (f) date of publication; (g) type of instructional material; and (h) location of the instrucitonal material. Following the identification of the fields, space estimates for each entry were made. Trial runs of the program were activated to determine if the space estimates were accurate. This was followed by a general familiarization of the search, sort and retrieval functions of The Modifiable Database. Once these activities were completed, the database had been modified to fit project needs and the software was ready for refinement.

Systems Refinement

Project staff began to input prototype materials into the system. Some of the catalog sheets generated from Objective 5 along with some of the materials from the Basic Skills Through Vocational Education project were tried. Space requirements were modified to fit actual needs of the entries. A coding form was developed for recording potential entries into the system (see Appendix F). Finally, the system was tested with actual basic skills materials which had been identified as useful in occupational education settings.

Records Development

After the software was developed and the system refined, model records and files were developed for illustrative purposes. Over 40 materials were coded which resulted in over 80 entries to the system. Search and sort operations were activated on the entries to illustrate the system's capabilities. The results were then organized for usage by those who chose to adopt the system.

User's Guide Production

As stated previously, the intent of this objective was to make the retrieval system available for occupational education centers throughout New York State. A "naive user's guide" to the CIOE instructional material's retrieval system was developed. The guide briefly outlined the purpose of the retrieval system and its potential uses. Sources of The Modifiable Database were outlined as were software costs. Finally, a section describing how to "modify" the database to fit the CIOE package was described. A copy of the user's guide is attached as Appendix G. (This section will be more detailed once the final user's guide is developed.)

With the production of the user's guide, the requirements of Objective 6 were completed.

Objective 7:
Articulation with Related ISSOE Projects

The Cornell Institute for Occupational Education operates under a system of programmatic work coordination. All Institute projects related to similar outcomes are coordinated under a Research Associate directly responsible for that coordination. The ISSOE projects funded to CIOE were under the daily direction of Dr. Robert Frank, Institute Coordinator for ISSOE Projects. He was responsible for articulating project activities whenever possible, coordinating ISSOE related travel and presentations, and supervising all CIOE/ISSOE activities. He was directly responsible to Dr. James Dunn, Principal Investigator for all CIOE/ISSOE projects, and Director of CIOE.

Primarily, articulation has centered around the sharing of project staff, the integration of instructional planning activities with field test and dissemination activities, and the coordination of presentations regarding CIOE/ISSOE projects. Specific instances of articulation were as follows:

- At the June 7, 1980 Instructional Planning workshop, held in Ithaca, New York, presentations were also made regarding the field test and dissemination projects.
- At the August 20, 1980 Instructional Planning workshop, held in Binghamton, New York, presentations were made regarding both the field test and the dissemination projects along with the interfacing character of CIOE/ISSOE projects.

- At the 1980 NYSOEA conference, held in Albany, New York, presentations related to the dissemination and instructional planning projects were made in conjunction with a presentation on the field test.

- In January and February, 1981, when at Long Island, New York for the field test, discussion and clarification of instructional planning project objectives and activities were held between CIOE staff and the ISSOE Area Facilitator and Regional Coordinators for that region.

- At the December, 1980 Statewide ISSOE Meeting, held in Albany, New York, a presentation was made regarding the three ISSOE projects being conducted by CIOE.

- At a session in Buffalo, New York, at SUNY Buffalo, a presentation was made to a graduate level curriculum class regarding all CIOE projects and the interfacing character of CIOE/ISSOE projects.

Of course, other, more informal, articulation occurred between CIOE/ISSOE staff and other CIOE projects. For instance, information was obtained from Agriculture Employment Demand Study staff at CIOE which was used in the determination of D.O.T. job titles for both the Instructional Planning Project and the field test. Information also was gathered from the Basic Skills Through Vocational Education project at CIOE as an integral component of the retrieval system.

This articulation and coordination helped to minimize costs to all CIOE/ISSOE projects, and assisted in providing the field with a coordinated system of materials.

In summary, the project was evaluated by three distinct methods, each contributing materially to project effectiveness. However, the final determination of project effectiveness cannot be realized until a year or two from now when an assessment of the degree of implementation of the instructional materials catalogs and retrieval system should be conducted.

PART III

PROJECT EVALUATION

The proposal for this project outlined three steps for project evaluation. An informal project review committee was employed to provide feedback regarding project work. That committee consisted of the following individuals and groups:

- CIOE Staff (James Dunn, Robert Frank, John Bowers, Peter Gray)
- Area Facilitator (Joan Penrose)
- Regional Coordinators (Donald Friedman, David Robin, Joseph Valletta, Angeline Gorman)
- Directors of Occupational Education (Rudolph Schneider, James McElhatten, Merl Bauer, John Sutter, Donald Hoak, Edward Nicholson and Francis Streeter)
- SED Personnel (Peter Cooke, Kenneth DeCerce, Willard Daggett, Richard Jones)

These individuals, both individually and collectively, provided guidance and evaluation throughout the duration of the project. Their insight helped the project provide both materials and services needed for the successful implementation of project deliverables.

The second line of evaluation was provided by the Cornell Institute for Occupational Education ISSOE Coordination Committee. That committee, comprised of senior researchers and project directors involved in ISSOE research and development, was actively involved in planning and assessing Cornell's total contribution to both ISSOE in general and the Instructional Planning Project in particular. The Committee met regularly throughout the duration of the project, evaluated the design of project activities, developed plans for accomplishing the scope of work included in the project, and reviewed

project deliverables. The Committee's evaluation of the materials prepared helped insure the accuracy and quality of the workshops, catalogues and final report.

Finally, evaluation was provided by the feedback received from workshop participants. This "field evaluation," often the most rigorous and important, validated the findings received from the previously listed evaluators.

In summary, the project was evaluated by three distinct methods, each contributing materially to project effectiveness. However, the final determination of project effectiveness cannot be realized until a year or two from now, when an assessment of the degree of implementation of the instructional materials catalogues and retrieval system should be conducted.

PART IV

PROJECT OUTCOMES

Four deliverables were prepared as a result of this project. The Instructional Materials Reporting Form, Appendix A, was developed and distributed to all ISSOE Regional Coordinators, Area Facilitators and appropriate SED staff. Individuals who wish to use the form for their needs may duplicate it directly from this report.

The second outcome from this project was the preparation of the Instructional Materials catalogs (described in Objective 5.) Seventy-five copies of each catalogue were printed. Fifty copies were sent to the Bureau of Occupational Education Program Development, New York State Education Department and one bound copy and a "camera ready" copy of each catalogue were sent to the Bureau of Occupational Education Research, New York State Education Department for further duplication and dissemination. The remaining copies were retained by CIOE for internal distribution. Individuals wishing to obtain copies of those catalogues should contact the New York State Education Department, Bureau of Occupational Education Research, Albany, New York.

The third product prepared by this project was the computer based retrieval system. That system produced two materials for use by occupational educators. First, the software package, as described in Objective 6, was developed. Second, the user's guide, explaining how to develop one's own retrieval system, was prepared. A copy of the user's guide is included in this report (Appendix G) and may be duplicated. It identifies the software houses which market The Modifiable Database and describes how to change the database to the system described in this report. Individuals who have questions regarding the retrieval system should contact the Cornell Institute for Occupational Education (607-256-6515).

Finally, one hundred and twenty-five copies of this final report were prepared. Twenty-nine copies, and one "camera-ready" copy were delivered to the Bureau of Occupational Education Research, New York State Education Department. Twenty copies were sent to the Bureau of Occupational Education Program Development, New York State Education Department. The remaining copies were retained by CIOE for distribution. Individuals wishing to obtain a copy of the report should contact either CIOE or the New York State Education Department.

PART V

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APPENDIX A

ISSOE MATERIALS REPORTING FORM

COURSE_____ School Name and Address_____

UNIT_____ _____

MODULE_____ Instructor_____

TASK_____ Phone Number_____

1979-1980 Task #_____ ISSOE Region_____

1980-1981 Task #_____ V-TECS Number_____

MATERIALS BEST SUITED FOR:

_____Individual Instruction ____Handicapped (Describe)_____

_____Group Instruction ____Other (Describe)_____

INSTRUCTIONAL LEVEL(S):	GRADE:	ABILITY:
_____Introductory	____ 10	_____Below Average Performance
_____Basic	____ 11	_____Average Performance
_____Advanced	____ 12	_____Above Average Performance

MATERIALS USED:

_____Textbook _____Workbook _____Other Printed Material (Describe)_____

_____Audio Visual Material (Describe)_____

_____Simulations/Demonstrations_____

_____Other (Equipment, Supplies, Etc.)_____

Title:_____

Author(s):_____Edition_____Copyright Date_____

Publisher:_____Cost_____

Pages used:_____

COMMENTS: Content_____Organization_____

Clarity_____Readability_____

Illustrations_____Length_____

Motivational Qualities_____

Includes: _____Student Directions _____Quizzes ____Teacher Aids

Teacher Comments:_____

_____

_____

_____

_____

APPENDIX B

ISSOE MATERIALS REPORTING FORMS

Cover Sheet

Region _____ Course _____

Priority _____ Teacher, last name only _____

Classification

_____ Task specific. Return to teacher.

_____ Task specific. Do not return to teacher.

_____ Task general. Do not return to teacher.

_____ Course general. Do not return to teacher.

Edit or revise these forms as follows:

_____ Make separate materials reporting forms for each possible task-materials combination.

_____ Write/rewrite forms in black fine point marker, not pencil or any other writing medium.

_____ Translate tasks into 1980-81 versions. Write both 79-80 and 80-81 code numbers in upper right blank of forms.

_____ Add V-TECS numbers from original teacher-completed forms to task code numbers in upper right blank of forms.

_____ Other, as follows: _____

_____

_____

First review by _____ on _____

Second review by _____ on _____

Sent to typist on _____

Returned from typist on _____

Completed on _____

APPENDIX C

New York State College of Agriculture and Life Sciences
a Statutory College of the State University
Cornell University
Department of Education
Stone Hall
Ithaca, N. Y. 14853

Cornell Institute for Occupational Education
Telephone 607-256-6515

Dear Occupational Education Teacher:

Last year you were requested by your Regional Coordinator to complete sheets reporting on your instructional materials. We asked for specific information on materials you had found to be successful for particular ISSOE competencies. These sheets were then relayed to me via Peter Cooke of the ISSOE Office, SED.

Presently I am compiling a catalog of instructional materials for ISSOE teachers. The sheets which you supplied contained many valuable pieces of information, but were also missing a few critical details. The additional information is necessary in order to give the reports maximum value for other teachers in your program area across New York State.

In my attempt to catalog these materials I have designed, with the help of over 100 New York occupational education teachers, a reporting form that is somewhat different from the one you completed. For the past three months, the staff at the Institute has been transferring the information you supplied on to the new reporting form. We discovered that you provided most of the information needed for successfully reporting particular materials, but failed to include a few essential pieces. In most instances, teachers simply did not include the author's name, publisher's name or the page number from the book corresponding with the instruction of a particular competency.

Would you please check over the attached form, and complete as many of the blanks as possible? When you have finished, please put the form in the attached envelope and mail it to me.

As always, direct input from teachers in the field is essential for our work. I sincerely appreciate your assistance with this effort to identify and catalog successful materials.

If I can be of further assistance to you, please do not hesitate to contact me.

Sincerely,
Robert Frank

Robert Frank
Institute Coordinator
for ISSOE Projects

APPENDIX D

New York State College of Agriculture and Life Sciences
a Statutory College of the State University
Cornell University
Department of Education
Stone Hall
Ithaca, N. Y. 14853

Cornell Institute for Occupational Education
Telephone 607-256-6515

January 30, 1981

Dear :

Last year you were requested by Peter Cooke to collect sheets describing resource materials used successfully by ISSOE teachers in your region. That activity occurred simultaneously with ISSOE research I was conducting on the evaluation of instructional materials.

I am presently attempting to catalog those sheets, in order to develop a system for sharing information about successful instructional resources. I have taken the sheets which you and your teachers sent to Peter, and have transposed the information from them onto our newly developed form. Because teachers were not requested to give specific information, I have found that certain important pieces of information are missing from the reporting forms. For example, many teachers reported that they are using a specific book for teaching a specific competency (e.g., The Van Dean Manual for business-office competency #020204), but failed to tell us information such as the publisher's name, or pages or chapters used for the competency. Therefore, I now have many reporting sheets that will be very useful if I can obtain a few missing pieces of information. That is where I need your help.

Enclosed with this letter are copies of some of the sheets describing instructional resources sent to Peter by teachers in your region. I chose to return to you only those sheets nearest to completion. I would appreciate your help in returning them to the teachers who completed them (their names and schools are included on the sheets), and asking those individuals to complete as much of the missing information as possible. I have attached a letter of explanation to the teacher and a self-addressed, stamped envelope for the teacher's use in returning the materials directly to me.

I sincerely appreciate your help in this project. We, the State Education Department and Cornell, feel that the sharing of successful instructional resources will be a real asset to occupational education in New York State. Your continued cooperation is essential for this development.

Sincerely,

Robert Frank
Institute Coordinator for
ISSOE Projects

cc:
RF:mbd

APPENDIX E

New York State College of Agriculture and Life Sciences
a Statutory College of the State University
Cornell University
Department of Education
Stone Hall
Ithaca, N. Y. 14853

Cornell Institute for Occupational Educatio
Telephone 607-256-6515

April 1, 1981

Dear

On January 30, 1981 I sent you a package of reporting forms for instructional materials that were being used in classrooms involved with ISSOE implementation. Many of the teachers have returned the forms and we are accumulating a vast resource catalog identifying specific materials as compatible with specific ISSOE tasks. However, some teachers have failed to return the forms and are holding up the completion of project activities.

Attached you will find a list of those teachers from your region who have not returned their forms. I would appreciate your contacting these individuals and soliciting their cooperation. Should the teacher indicate that they do not intend to return the forms, please pass that information on to me.

We are hoping to complete project activities within the next few months. Your cooperation has been and continues to be essential for this project; I do appreciate your help in the distribution of the forms. Any additional help which you can provide also will be greatly appreciated.

Should you have any problems with this request, please do not hesitate to contact me. Again, thanks for your cooperation.

Sincerely,

Robert Frank
Institute Coordinator for
ISSOE Projects

RF/mw
Enc.

cc: R. Jones

ISSOE REGION

REGIONAL COORDINATOR

PROGRAM AREA	TEACHER(S)

APPENDIX F-1

New York State College of Agriculture and Life Sciences
a Statutory College of the State University
Cornell University
Department of Education
Stone Hall
Ithaca, N. Y. 14853

Cornell Institute for
Occupational Education
Telephone 607-256-6515

CIOE RETRIEVAL SYSTEM
for
TECHNICAL SKILLS
Instructional Materials

CODING FORM

RECORD #_____

FIELD ENTRY

1. OCCupational EDucation: ____.____.____
(1-7) (A-X)(1-9)

2. TECHnical SKILLS: _____
(0-999999)

3. MATerial TITLE: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ (Maximum of 49 Characters)

4. AUTHOR(S) ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ (Maximum of 30 Characters)

5. PUBLISHER: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ (Maximum of 30 Characters)

6. DATE of PUBlication: ____ ____ ____ ____ ____ (Maximum of 5 Characters)

7. TYPE of MATerial: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ (Maximum of 30 Characters)

8. LOCATION: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ (Maximum of 49 Characters)

Developed by the Cornell Institute for Occupational Education

New York State College of Agriculture and Life Sciences
a Statutory College of the State University
Cornell University
Department of Education
Stone Hall
Ithaca, N. Y. 14853

Cornell Institute for Occupational Education
Telephone 607-256-6515

CIOE RETRIEVAL SYSTEM
for
Occupational Education/Basic Skills
Instructional Materials

CODING FORM

RECORD # _____

FIELD ENTRY NAME

1. OCCupational EDucation: ____.____.____
   (1-7) (A-X) (1-9)

2. BASIC SKILLS: ____.____.____.____
   (1-4) (0-9) (0-9) (0-99)

3. MATerial TITLE: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ (Maximum of 49 Characters)

4. AUTHOR(S): ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ (Maximum of 30 Characters)

5. PUBLISHER: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ (Maximum of 30 Characters)

6. DATE of PUBlication: ____ ____ ____ ____ ____ (Maximum of 5 Characters)

7. TYPE of MATerial: ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ (Maximum of 30 Char.)

8. LOCATION: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ (Maximum of 49 Characters)

Developed by the Cornell Institute for Occupational Education

APPENDIX C

INSTRUCTIONAL MATERIALS RETRIEVAL SYSTEM

ROBERT FRANK

PETER GRAY

*****

This guide was prepared by the Cornell Institute for Occupational Education, a component of the State Research Coordinating Unit, Division of Occupational Education Planning and Information, Research and Evaluation, with funds provided by the Division of Occupational Education Instruction, under the terms of Grant #80-3A-1115GS funded from the Vocational Education Amendments of 1976.

*****

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ACKNOWLEDGEMENTS

This user's guide is the final component of the Instructional Materials project conducted at Cornell University by the Institute for Occupational Education. The guide is designed to assist educators establish an instructional materials retrieval system using APPLE computers. The system can be used with either basic academic or vocational/technical skill instructional programs.

The initial programming of the software was prepared by Dr. Peter Gray, Research Associate at the Institute and Executive Project Director for the USED Basic Skill Development Through Vocational Education project. The refinements of the software and this user's guide were prepared by Dr. Robert Frank, Institute Coordinator for ISSOE Projects. He was assisted in the revisions of the guide by Dr. Gray.

It is hoped that this retrieval system will greatly enhance the delivery of both basic academic and technical skills to students not only in New York State but in the rest of the nation.

James A. Dunn
Institute Director and
Professor of Education

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B. Occupational Education/Technical Skills Coding Scheme
C. Occupational Education/Basic Skills Coding Form
D. Occupational Education/Technical Skills Coding Form

INTRODUCTION

This guide is designed to assist individuals who have APPLE II or APPLE II Plus mini-computers to establish an instructional materials retrieval system for either basic academic or vocational/technical skills instructional programs. The guide is designed to be a "do-it-yourself" manual, assuming that the reader is familiar with APPLE operations and terminology.

The guide is divided into several parts: software preparation, preparing records, modifying records, storing records, accessing records and problems.

At the end of the guide are five appendices. The first contains a description of the coding scheme recommended for basic academic skills materials. The second contains a similar scheme for technical/vocational materials. The third and fourth are the forms to code instructional materials. Finally, a sequence for coding materials is outlined in Appendix E.

Should you have any problems with the guide, please feel free to call the Cornell Institute for Occupational Education (607-256-6515) for assistance.

MATERIALS NEEDED

To prepare the instructional materials retrieval systems you will need the following materials:

- An APPLE II or an APPLE II Plus mini-computer with APPLESOFT firmware or language card. 48K or RAM and at least one disc drive are also required. A printer is optional but will greatly enhance the versatility of the system since "hard copy" can be prepared.

- A copy of The Modifiable Database (TMD) manual and floppy disc available from Synergistic Software, 5211 120th Avenue S.E., Bellevue, WA 98006 (phone number 206-226-3216). The software package costs about $80.00 and may be ordered directly from Synergistic Software.

- A blank initialized floppy disc that has been initialized with a greeting program compatible with your system. For most APPLE II and APPLE II Plus systems, the greeting program "HELLO" is used.

- A few completed coding forms for either basic academic or vocational/technical skills materials (see Appendices C and D).

- About 1 hour of your time.

MODIFYING THE SOFTWARE PACKAGE

To modify the software package, you will need to have the following materials:

- A copy of TMD floppy disc
- The manual for TMD
- A blank initialized floppy disc with an APPLESOFT greeting program

The following is a step-by-step guide to establishing a retrieval system. Narrative or instructions will be typed in this typestyle and will be in the left column. Words that will appear on the screen on your APPLE will appear in **THIS TYPESTYLE** and will appear in the center column. Words that you should type on the APPLE keyboard, or words that we used when developing the program will be typed in *THIS TYPESTYLE* and will be in the right hand column. Those words or phrases that we used will be enclosed in *[]*. Ready? Begin.

Instructions	**THE SCREEN SAYS**	*YOU TYPE*
1. Turn on the APPLE screen and printer (if you are using a printer). Press RESET and CONTROL (CTRL) buttons on the keyboard. You should see a and a blinking light (cursor).		
2. Put in your DISCWARE DOS 3.3 BASICS MASTER floppy disc. Close the drive door. Type. . . . . and then press RETURN (hereafter, when you are to press RETURN, we will just say "R").		*PR#6*
3. The screen will read,. .	**INSERT YOUR 13 SECTOR DISKETTE AND PRESS RETURN**	

Instructions	THE SCREEN SAYS	*YOU TYPE*
4. Remove the Master and replace it with TMD floppy disc. Close the drive door and press R.		
5. The screen will again show a and the cursor, followed by:.	**THE MODIFIABLE DATA-BASE MASTER SETUP PROGRAM BY ROBERT CLARDY AND CHRIS ANSON**	
6. This will disappear and reappear with a 13 line note. Read the note. Do you have a blank initialized diskette with an APPLESOFT greeting program? If no, see your APPLE II DOS Manual. Have you read The Modifiable Database Software Manual? If not, do that also. If you answered yes to both questions, then you are ready to proceed. Press R.		
7. Read what appears on the screen. Note that you have 250 characters with no more than 22 fields. Press R.		
8. The screen now reads. . .	**PLEASE TYPE IN YOUR NAME**	
9. You should type in your name or what is in the third column.		*Type your name [P.J. GRAY AND R.M. FRANK]*
10. The screen now reads:. .	**WHAT DO YOU WISH THE NEW PROGRAM TO BE CALLED (LIMIT 30 CHARACTERS). . . . . .**	*[BASIC SKILLS RETRIEVAL SYSTEM] or [TECHNICAL SKILLS RETRIEVAL SYSTEM*

Instructions	THE SCREEN SAYS	*YOU TYPE*
11. Now you are asked:. . .	**WHAT IS THE NAME OF THE GREETING PROGRAM ON YOUR BLANK, INITIALIZED DISC?. . . .**	*[HELLO]*
12. (Before completing these steps check with your local expert.)		
a. Type in the information that is appropriate for your system when asked:. .	**WHICH 1/O PORT IS YOUR PRINTER CONNECTED TO?. . . . . .**	*[1]*
b. And when asked:. . .	**DOES YOUR PRINTER REQUIRE A PRINTER DRIVE ROUTINE (Y/N). .**	*[N]*
c. And when asked:. . .	**DOES YOUR PRINTER REQUIRE ANY CONTROL CHARACTERS TO BE SENT TO IT BEFORE PRINTING (SUCH AS CONTROL I 80 N FOR PARALLEL CARDS (Y/N))?.**	*[N]*
d. And again, when asked:.	**HOW MANY DISC DRIVES DO YOU HAVE?. . . . . .**	*[2]*
The system will work equally well with one or two drives. Indicate how many you have.		
13. Now, we will begin to develop the program. When the screen reads:. .	**HOW MANY FIELDS DO YOU WANT IN EACH RECORD?**	
You should type:.		*[8]*

Instructions	THE SCREEN SAYS	*YOU TYPE*
14. The screen will now read:.	**PLEASE TYPE IN THE NUMBER OF CHARACTERS YOU WISH TO HAVE IN EACH FIELD AND THE TITLE OF THE FIELD. PRESS RETURN AFTER EACH ENTRY HAS BEEN MADE. PRESS RETURN WHEN YOU ARE READY TO BEGIN**	
15. You should press R and fill out the table, pressing R after each entry shown below. If you make a mistake, don't worry; you will have a chance to correct it later. The numbers in the left hand column will be appearing on the screen automatically. Ready? Press R.	1.	*[5 OCC. ED.]*
	2.	*[8 BASIC SKLS or TECH. SKLS]*
	3.	*[49 MAT. TITLE]*
	4.	*[30 AUTHOR(S)]*
	5.	*[30 PUBLISHER]*
	6.	*[5 DATE PUB.]*
	7.	*[30 TYPE MAT.]*
	8.	*[49 LOCATION]*
16. After you press R after typing location, the screen will read:. . . .	**THAT'S ALL THE FIELDS. WITH THE FIELDS AS DEFINED, YOU CAN HAVE 110 RECORDS ON LINE. ARE YOU SATISFIED WITH IT (Y/N)?**	
17. If you're satisfied with the layout (if it has no mistakes) then skip to step 19. If you made a mistake, type:.		*[N]*

Instructions	THE SCREEN SAYS	*YOU TYPE*
18. The only reason you should be reading this sentence is because you made a mistake and have pressed N as told in step 17. If you made no mistakes, then you should be at step 19. Since you made a mistake, and pressed N, the screen now reads:.	**PRESS ESC. TO EDIT OR RETURN TO START OVER.**	
Assuming that you did not botch the whole job and just made a mistake or two, you should press the ESC. key. If you did botch the whole job, then press R and go back to step 13.		
When you pressed ESC, the following message appeared on the screen:.	**44 CHARACTERS LEFT, RECORD TO CONTAIN 8 FIELDS, WHICH FIELD (TYPE 0 FOR NO EDIT)?**	
If you made a mistake in Field 5, for instance, just type in 5 and the cursor will begin flashing where the number 30 is to appear. Make the correction and press R. If PUBLISHER is correct, simply press R again. Once the table is correct, by repeating the above procedure, the screen will ask you if you are satisfied with it. If you are,		
19. Type.		***[Y]***
20. Now, remember in step 15 you were asked how many disc drives you have. Well, the APPLE now requires we separate those		

Instructions	THE SCREEN SAYS	*YOU TYPE*
with one drive from those with two. If you have one drive, go to step 21. If you have two drives, go to step 23.		
21. You are reading this only because you have one drive, right? If you have two drives, you should be at step 23. O.K. You typed Y when asked if you were satisfied and the screen now reads, after a brief message:.	**WHEN THE CURSOR RETURNS, YOUR NEW PROGRAM IS READY, YOU SHOULD THEN INSERT THE BLANK, INITIALIZED DISKETTE INTO YOUR DRIVE.** **TRACE OVER THE FOLLOWING LINES USING THE FORWARD ARROW AND PRESS RETURN AFTER EACH LINE. (THE "NOTE" IS NOT IMPORTANT TO US.)**	
You should do exactly that, inserting your diskette in Drive 1, tracing over each line with the <u>forward arrow</u> key. Be sure to press R at the end of each line. For the first two lines, when you do this, the cursor will disappear for a few seconds and reappear on the next line. Repeat the procedure. You should trace over six lines. (Save "Hello" is the last line.) When the		

Instructions	THE SCREEN SAYS	*YOU TYPE*
cursor appears on the line with no typing, the modification is completed. You should now type:.		*[RUN BASIC SKILLS RETRIEVAL SYSTEM]* or *[RUN TECHNICAL SKILLS RETRIEVAL SYSTEM]*
or whatever you gave your program in step 10. The screen will read,. . . .	**BASIC SKILLS RETRIEVAL SYSTEM R.C. CLARDY & C.P. ANSON REVISED BY**	
This will appear only for a few seconds, followed by the "Main Menu."		
22. You should now go to the next section of this guide, PREPARING AND ASSESSING RECORDS.		
23. You are reading this only because you have two disc drives, right? If you only have one drive, then you should be at step 21.		
Now, in step 20, when asked if you were satisfied, you should have typed Y. If you did the screen now reads:. . . .	**INSERT BLANK INITIALIZED DISC WITH GREETING PROGRAM 'HELLO' INTO DRIVE 2 AND PRESS RETURN.**	
24. That's pretty simple. Put your blank disc in drive two, close the door and press R. You will hear a whirring sound and the "in use" lights will flash on and off on both drives. When the modification is completed a copy of the		

Instructions	THE SCREEN SAYS	*YOU TYPE*
catalog will appear on the screen. It will look like this:.	**DISK VOLUME 254** *** A 002 HELLO** **A 037 BASIC SKILLS RETRIEVAL SYSTEM** *** B 007 DBFILES** **T 004 SETUP**	
25. Type.		*[RUN BASIC SKILLS RETRIEVAL SYSTEM]* *or* *[RUN TECHNICAL SKILLS RETRIEVAL SYSTEM]*
26. You should now go to the next section of this guide, PREPARING AND ACCESSING RECORDS.		

PREPARING AND ACCESSING RECORDS

You are reading this because you have satisfactorily "booted" TMD and have made the necessary changes to prepare the retrieval system. Now, you are ready to begin preparing records. Do you have a few completed coding forms available? Are they for basic academic or technical skills? Assuming that you initially prepared the retrieval system for basic academic or technical skills? Assuming that you initially prepared the retrieval system for basic academic skills, you should use those forms. (You can, of course, go back through TMD and prepare an additional modification, naming that new version TECHNICAL SKILLS RETRIEVAL SYSTEM (see step 10). Then, you would be able to catalog technical skills materials as well as basic skill materials.)

The screen should appear as in the example below:

MAIN MENU

1. **START A NEW FILE**
2. **ENTER RECORDS**
3. **LIST/MODIFY**
4. **SEARCH**
5. **SORT**
6. **PRINT**
7. **DISC ACCESS**
8. **TERMINATE**

WHICH? **0 OF 110 RECORDS USED**

First, don't press 1, "Start a New File," since this will erase all records currently in memory. (Should you press 1 by mistake, a warning will appear indicating the consequences of continuing in this mode. You will be allowed the opportunity to terminate that decision.)

Pressing 2 is the correct response for preparing records. When pressed, a new image will appear on the screen. It will read:

RECORD #1

OCC. ED. ' ' ' ' '

BASIC SKLS

MAT. TITLE

AUTHOR(S)

PUBLISHER

DATE PUB.

TYPE MAT.

LOCATION

ENTER DATA FOR
OCC. ED. FIELD

RTN = CONTINUE
ESC = RETURN TO MENU

First, notice that the cursor is flashing over the first hash mark in the "OCC. ED." column and in the lower right hand corner a statement indicates that you are to enter the data for the field, "OCC. ED.". Also, notice that you have two other options as shown in the lower right hand corner: one is to continue entering a record by pressing "RTN," or to escape to the menu by pressing "ESC." To keep things simple, let's enter a record before returning to the menu and working with the other options (search, sort, etc.). (One final note. If you are working on the Technical Skills program, Field 2 should read "TECH. SKLS" and not "BASIC SKLS".)

You will notice that there are five hash marks opposite the "OCC. ED." field since that's how many characters you told the computer to reserve for this field. Your coding form indicates that the first character should be numeric and range from 1-7, the second should be a period (.), the third should be alphabetic (A-X), the fourth, a period

(.), and the fifth, numeric (1-9). (You should see Appendix A of this guide for the recommended coding scheme for the Basic Skills Retrieval System and Appendix B for the recommended coding scheme for the Technical Skills Retrieval System.) Type the information as it appears on the coding form. Remember, to type a 1, you must hit the "1", not the lower case "L".

After you have typed in the last character, press RETURN (remember the note in the lower right hand corner of the screen) because you want to continue working on this record. Now, you will find eight hash marks opposite the field title, "BASIC SKLS" with the lower left hand corner reading:

ENTER DATA FOR
BASIC SKLS FIELD

You should continue in a manner similar to that for "OCC. ED." Another reminder: The last entry for "BASIC SKLS" must be a two digit number. Therefore, if the coding scheme indicates that number to be 0-9, it should be typed as 00, 01, 02, etc. When you have finished the basic skills field, press R and continue with the field "MAT. TITLE". Repeat this procedure to enter an entire record.

All field entries are taken directly from the coding form. After completing the field "LOCATION" and pressing R, the screen will show all entries and a list of options will appear in the lower right hand corner. An example of a completed record follows.

RECORD #66

OCC. ED. : 0.X.0.
BASIC SKLS : 2.2.2.03
MAT. TITLE : PINPOINT CRITICAL READING
: SKILLS SERIES (3 BOOKS)
AUTHOR(S) : BARNES, BURGDORF, PEAK
PUBLISHER : STECK-VAUGHN COMPANY
DATE PUB. : 1980
TYPE MAT. : WORKBOOK AND A GUIDE
LOCATION : BK. 1,P.58-69; BK. 2,P.55-66; BK. 3,P.58-66.

RTN = CONTINUE
ESC = RETURN TO MENU
'E' = EDIT
'D' = DELETE
'P' = PRINT

Pressing RETURN will bring you to RECORD #2 with the field indicated as shown in RECORD #1. You should input the information for RECORD 2, using another coding sheet.

Pressing ESC will return you directly to the Menu.

Pressing "E" will cause numbers 1-8 to appear immediately to the left of each field name. A message will appear, which reads: **MODIFY WHICH FIELD?** If you have a mistake in Field 2, for instance, press "2" and the cursor will begin flashing over the first character in that field. Make your corrections to that field and press R when all corrections are made. You will be given the five options (RTN, ESC, E, D, P) again. Choose the one which is appropriate for you at this time.

Pressing "D" will allow you the option of completely erasing the record. A warning statement will appear alerting you of the consequences of continuing in this mode.

Pressing "P" will cause the printer to print the record as it appears on the screen, assuming you have a printer hooked up to your APPLE. On some machines you may need to press "P" twice or press "P" followed by pressing the RETURN key to activate the printer. Once the

printing is completed, you will be offered the entire record and the five options (RTN, ESC, E, D, P) again. Assuming the record was correct, you should either press R to go to the next record or ESC to return to the menu. Either way, once you have finished all record inputting, you should press ESC.

If you press ESC, you will have a copy of the MAIN MENU appear on the screen. Let's discuss what the various options provide.

As stated previously, "1. START A NEW FILE" erases all previous records on the disk.

Pressing "2. ENTER RECORDS" is the mode we just completed.

Pressing "3. LIST/MODIFY" allows you to change a record. If you press "3", the screen will ask you, **WHICH RECORD?**. You should type the record number that you wish to change. Should you not remember which number needs revison, you can press "1"R and Record #1 will appear. If that is not the record you desire, simply press R again and again until the record you want appears. If you have many records on file, and you know that the one needing revison is after Record #30, for instance, type "30" and Record #30 will appear. You can then press R until you find the needed record.

Once you have found the record you want, pressing "E" will allow you to edit that record. When modifications are completed, you may either press R (to continue to the next consecutive record) or ESC (to return to the menu).

Pressing "4. SEARCH" will allow you to find any and all records on the file. First, you will be asked if you want your results displayed (1) or printed (2). Select the option you desire. Then you will be asked to choose one of four options. Those are:

(1) **CURRENT FILE ONLY**
(2) **ALL FILES DISK 1**
(3) **ALL FILES DISK 2**
(4) **ALL FILES BOTH DISKS**

If current files includes any modifications, it should be saved before search options 2, 3 or 4 are chosen. A warning statement will appear if those options are selected prior to saving the file. (Continuing with options 2-4 without saving the modifications will cause those modifications to be erased. To save those modifications, see page 20 of this guide under the section "DISK ACCESS".)

After selecting the search range (options 1-4), you will be asked to specify the search mode (WHICH SEARCH OPTION?). There are three modes available. You can search for a substring, search one field or search two fields. Choose one of the options. You should indicate the field or fields you wish to search (with numbers 1-8). The program then will display or print the records that contain the specified search information.

Searching a substring allows the user to search any one field for a part of that field's contents. For instance, in Field 7, "TYPE MAT." you could have entries such as TEXTBOOK, TEXT BOOK, SOFT TEXT, HARD TEXT, HARDTEXT, etc.; you could search the key substring "TEXT" of Field 7. The screen or printer will show each and every entry that has the four-letter combination T-E-X-T. "TEXT" is the key substring.

Searching for one field will produce only those records that begin with the exact contents of the search key. Searching Field 7 for "TEXT" will produce no findings unless the first word in that field was "TEXT". If, for instance, entries were "HARD TEXT WITH A GUIDE", "SOFT TEXT", and "SOFT TEXT WITH A TEACHER'S GUIDE", either word "HARD" or "SOFT" must be the first word of the key word. That is, when searching a field, the first word of the search key is the most important, for if that word does not appear in any of the entries, the search will produce no results.

Searching two fields is nearly identical to one field searches except that you are allowed the flexibility of screening the range of possible options even further. Please note that when searching two fields, always identify the lowest number field as the first field to be searched. That is, if searching fields 4 and 7, when asked **SEARCH WHICH FIELD?** type 4 first. Then, when asked, **SECOND FIELD**, type 7.

Once you have identified the search range and mode, and typed the search keys, the APPLE will either prepare the results for visual display or printer. Should you elect visual display, the first record will appear on the screen. Pressing the RETURN key will display the second record, and so on until no more records are left. Should you choose to have your records printed, all relevant records will be automatically printed.

Pressing "5. SORT" will order records alphanumerically on any given field or fields. It will only work on the current working file and will not work unless your system has a printer. You will have three options for sorting: 1, 2 or 3 fields. The procedures to be followed are very similar to "SEARCH" and instructions are shown on the screen.

Pressing "6. PRINT" may be used to print all or some of the records in the file. Six options are available. They are:

(1) PRINT 1 RECORD
(2) PRINT STARTING AT. . .
(3) PRINT ALL RECORDS IN CURRENT FILE
(4) PRINT ALL RECORDS ON DISK 1
(5) PRINT ALL RECORDS ON DISK 2
(6) PRINT ALL RECORDS ON BOTH DISKS

Selection of option 1 will require you to identify which record you want printed. After being printed, the screen will return to the MAIN MENU. Option 2 requires you to identify where you want the printing to begin (with which record)? Immediately upon pressing that record number and the RETURN key, printing will commence.

Option 3 will begin printing all records of the file as soon as the RETURN key is pressed.

Options 4, 5 and 6 also will begin printing as soon as the return key is pressed. At the end of the printing cycle for any one of the options, the screen will return to the MAIN MENU.

Pressing "7. DISC ACCESS" will offer you four options. These are:

(1) LOAD
(2) SAVE
(3) DELETE
(4) CATALOG

Pressing 1 will cause the following to appear on the screen.

INPUT FILE NAME (RETURN FOR CATALOG)
/ / / / / / / / / / / / / / / / / / /

Assuming you have previously saved a "current file", you should input that file name. If you can't remember the file name, press R and the catalog will appear.

The file name entry will be less than 19 characters in length with a "B" and no "*" preceding it in the catalog. Simply type in the file name exactly as it appears in the catalog. Press R and the file will be loaded. Each time you start a new session, after the first session, you will need to load the file in which you are working. Otherwise, you will not have access to the previous records. After loading the file, the screen will show the MAIN MENU and the lower right hand corner of the screen will indicate the number of records prepared.

Pressing option two will offer you the same message as "LOAD" does, except now you want to "SAVE" the file. If this is your first time saving a file, you should type in the file name, of less than 19 characters, which will remind you of the file's contents (so you can

load it later). You might use names such as BASIC SKLS RET SYST or TECH SKLS RET SYST. This option should be used at the end of each session so your current file is saved for future use.

Should you forget the file name, it will be identifiable in the catalog because it will have a "B" with no "*" preceding it.

Pressing 3 will allow you to delete the file. Use it only if you never want to access the file again. A warning statement will appear indicating the consequences of continuing in this mode.

Pressing 4 will show the catalog of disk contents.

The final option of the MAIN MENU is "8. **TERMINATE**". This is used to end work on the file. Should new records be entered, or modifications be made without storing those records or modifications, and "8" is pressed, a warning statement will appear indicating that to continue in this mode will result in the erasure of all new or modified non-stored records. If you want to keep those records, you must store them first.

Should you desire to terminate activity, and you have stored the records, press "8" and when asked **"TERMINATE (Y/N)"** type Y.

SHORTCUTS

There are a few "shortcuts" that one can use to assist in the preparation and storing of records. They both center around the use of the colon (:) for duplication of information.

When preparing records, you may find that information from one record is identical to information to be included on the subsequent record. This would be especially true when preparing records from one book, for instance, whereby the only changes could be in Fields 2 (Basic Skills) and 8 (Location). That is, the information for the other fields would be identical for several records. To assist you in the preparation of the subsequent entries, you can use the colon to bring information from the immediately preceding record to the same field of the current record. If, for instance, RECORD #1 was as follows:

```
OCC. ED.      : 1.C.4
TECH SKILLS   : 898989
MAT. TITLE    : FUNDAMENTALS OF AG. MECH.
AUTHOR(S)     : FRANK, R.M.
PUBLISHER     : NORTHEAST PUB. CO.
DATE PUB.     : 1981
TYPE MAT.     : HARD TEXT
LOCATION      : PAGES 18-22
```

and RECORD #2 contained the same information except for changes in Field 2 and Field 8, you can press the ":" for Fields 1, 3, 4, 5, 6 and 7 and the information from RECORD #1 will be included in Record #2. This method will save you much time and provide more accurate entries.

A second shortcut involves the storing of a file. After you have stored a file under a particular file name, you will probably return to that file name, at a later date, to either add records or modify some of the current records. When you have completed this addition or multiplication, you will need to save those records in their present form. You can do this very easily by returning to the MAIN MENU, pressing 7 (DISK ACCESS) and then pressing 2 (SAVE). You will be asked

if you want to save the current file and if so, you can do this simply by pressing ":". That will cause the APPLE to save your modifications or additions OVER the previous records of the same file name. It saves you the trouble of retyping the file name or of generating a new file name. One note, however: You cannot save OVER a file with the same file name if the metal protector tab is on your disk. If you try to do this, you will get an ERROR message on the screen. You should then remove the floppy disk from the drive, remove the metal tab, re-insert the floppy disk and try to store the document again.

PROBLEMS

In preparing this guide, we have tried to outline steps in a manner that will avoid any problems. But if you are like us, you will undoubtedly find, or have, some problems. Your first step should be to return to the section of this guide related to the problem and see if you have followed our directions. You also might check the manual for The Modificable Database to see if the answer is there. And, of course, you can call us (607-256-6515) and we will do our best to help you.

APPENDICES

A. Occupational Education/Basic Skills Coding Scheme

B. Occupational Education/Technical Skills Coding Scheme

C. Occupational Education/Basic Skills Coding Form

D. Occupational Education/Technical Skills Coding Form

APPENDIX A

FIELD 1 -- OCCUPATIONAL EDUCATION PROGRAM AREA

Entry must be a 5 character entry. -- ____.____.____ (Each period counts as a character)

The first blank is for major field: responses are numeric.

1 = Agricultural Education
2 = Distributive Education
3 = Health Occupations Education
4 = Home Economics Education
5 = Business and Office Education
6 = Technical Education
7 = Trade, Industrial or Service Occupations

The second blank is for program area within the occupational major field: responses are alphabetic.

1. AGRICULTURAL EDUCATION

A. Prevocational Studies in Agriculture
B. Agriculture Production
C. Agricultural Mechanics, Farm Mechanics
D. Ornamental Horticulture
E. Conservation
F. Agriculture Technology
G. Other Agriculture Program

2. DISTRIBUTIVE EDUCATION

A. Prevocational Studies in Distributive Education
B. Advertising Services and Sales
C. Apparel, Fashion Merchandising
D. Automotive, Petroleum, Service Station Management
E. Food Distribution and Production
F. General Merchandising and Sales, Wholesaling
G. Real Estate
H. Other Distributive Education Program

3. HEALTH OCCUPATIONS EDUCATION

A. Prevocational Studies in Health Education
B. Dental Assisting
C. Dental Lab Technology, Dental Lab Assisting
D. Medical Lab Assisting
E. Nursing, Licensed Practical
F. Nurse Assisting, Nurse Aide
G. Home Health Assisting
H. Medical Assisting (Office)
I. Other Health Occupation Program

4. HOME ECONOMICS EDUCATION

A. Prevocational Studies in Home Economics
B. Care and Guidance of Children
C. Clothing and Textiles, Clothing Management, Dry Cleaning, Upholstering, Textile Production and Fabrication
D. Food Services, Food Management, Quantity Food Occupations
E. Other Home Economics Program

5. BUSINESS AND OFFICE EDUCATION

A. Prevocational Studies in Business and Office Education
B. Bookkeeping and Accounting
C. Data Processing, Duplication
D. General Office Typing, Filing, Clerical
E. Stenographic and Secretarial
F. Supervision, Business Administration
G. Office-Related Technology
H. Other Business or Office Education Program

6. TECHNICAL EDUCATION

A. Prevocational Studies in Technical Fields
B. Architectural Technology, Drafting
C. Chemical Technology, Structure Drafting
D. Civil Technology, Structure Drafting
E. Electrical Technology
F. Electronic Technology, Computer Circuitry
G. Electro-Mechanical Technology
H. Mechanical Technology, Mechanical Design
I. Other Technical Education Program

7. TRADE, INDUSTRIAL OR SERVICE OCCUPATIONS

A. Prevocational Studies in this Area
B. Air Conditioning, Refrigeration, Heating
C. Appliance Repair
D. Auto Body and Fender Repair
E. Auto Mechanics-Diesel
F. Aviation Operations, Mechanics and Services
G. Commercial Arts, Advertising, Interior Decorating
H. Commercial Photography
I. Carpentry, Building Construction
J. Masonry, Bricklaying
K. Plumbing and Pipefitting
L. Glazing, Glass Repair or Replacement
M. Building Maintenance, Custodial Services
N. Drafting (Architectural, Electrical or Mechanical)
O. Electrical Occupations, Commercial or Residential
P. Electronics, Radio/TV Service, Industrial Electronics
Q. Graphic Arts, Offset Press, Litho Press, Printing
R. Maritime Occupations, Fisheries, Boat Building
S. Maritime Shop, Machine Tool Operators
T. Sheet Metal
U. Welding and Cutting Metals
V. Metalworking, Pattern Making
W. Cosmetology
X. Other Trade, Industrial or Service Occupation

The third blank is for the course number within the program area. These numbers are to be determined by the local educational center.

Examples

If the student was in Agricultural Mechanics I, the number would be:

Agricultural Education = 1
Agricultural Mechanics = C
Agricultural Mechanics I = 1

The appropriate number for this course would be 1.C.1

If the student was in Cosmetology II, the number would be:

Trade, Industrial or Service Occupations = 7
Cosmetology = W
Costmetology II = 2

The appropriate number for this course would be 7.W.2

If the student was in Stenography, the number would be:

Business and Office Education = 5
Stenography = E
With no course number, the last number becomes 0

The appropriate number for this course would be 5.E.0

FIELD 2 -- BASIC SKILLS AREA

Entry must be an 8 character entry.-- ____.____.____.____ (Each period counts as a character. The last entry is two digits.)

The first blank is for the subject area in basic skills: responses are numeric.

1 = Mathematics
2 = Reading
3 = Writing
4 = Oral Communication
5-9 = These are for locally developed or locally identified needs

The second blank is for the topic: responses are numeric.

1. **MATHEMATICS**

    1. Arithmetic
    2. General Mathematics

2. **READING**

    1. Informational Reading
    2. Critical Reading

3. **WRITING**

    1. Mechanics
    2. Word Selection
    3. Structure of Written Messages

4. **ORAL COMMUNICATION**

    1. Listening Comprehension
    2. Language Usage

The third blank is for the subtopic: responses are numeric.

1. **MATHEMATICS**

    1. Arithmetic

        1. Whole number operations
        2. Fractional operations
        3. Decimal operations

    2. General Mathematics

        1. Percentage, ratio and proportion
        2. English measurement
        3. Metric measurement
        4. Conversions
        5. Equations and story problems

2. **READING**

    1. Informational Reading

        1. Reading for facts
        2. Reading for instructions
        3. Reading for concepts

2. Critical Reading

    1. Reading to infer meaning or to generalize
    2. Reading to detect fallacy
    3. Reading to identify persuasive intent

3. WRITING

1. Mechanics

    1. Alphabetize
    2. Capitalize
    3. Punctuate
    4. Write legibly
    5. Spell

2. Word Selection

    1. Grammar
    2. Diction

3. Structure of Written Messages

    1. Phrases and sentences and paragraphs
    2. Forms, outlines, notes, memos and letters

4. ORAL COMMUNICATION

1. Listening Comprehension

    1. Listening to comprehend the literal meaning of a passage
    2. Listening to infer meaning or to generalize
    3. Listening to detect inconsistency, fallacy or persuasive intent

2. Language Usage

    1. Speaking in face-to-face situations
    2. Speaking over the telephone
    3. Speaking with proper quality and delivery

The fourth blank is for the performance objective: responses are numeric.

1. **MATHEMATICS**

    1. Arithmetic

        1. Whole number operations

            1. addition
            2. subtraction
            3. multiplication
            4. division

        2. General Mathematics

            1. Percentage, ratio and proportion

                1. finding the base
                2. finding the percent
                3. finding the percentage
                4. finding the ratio
                5. finding the missing term

            2. English measurement

                1. linear measurement of line segments
                2. comparison and conversion of units (linear)
                3. operations of units (linear)
                4. spatial measurements of squares, rectangles, etc.
                5. spatial measurements of circles, ovals, etc.
                6. comparisons and conversions of units (spatial)
                7. operations of units (spatial)
                8. measurement of angles
                9. computations of area
                10. mass measurements
                11. comparison and conversions of mass
                12. operations involving mass
                13. capacity measurements
                14. comparisons and conversions of capacity
                15. operations involving capacity

            3. Metric measurement

                1-15 -- Same as English except using the metric units of line, space, mass and capacity

4. Conversions

    1. fractions to decimals
    2. decimals to fractions
    3. fractions to percents
    4. percents to fractions
    5. decimals to percents
    6. percents to decimals
    7. U.S. Customary linear to metric
    8. U.S. Customary spatial to metric
    9. U.S. Customary mass to metric
    10. U.S. Customary capacity to metric
    11. metric linear to U.S. Customary linear
    12. metric spatial to U.S. Customary spatial
    13. metric mass to U.S. customary mass
    14. metric capacity to U.S. customary capacity

5. Equations and story problems

    1. solve one and two step equations
    2. solve algebraic expressions
    3. identify operations and information needed to solve story problems
    4. solve one and two step story problems

2. **READING**

1. Informational Reading

1. Reading for facts

1. obtain needed facts
2. obtain needed figures
3. obtain specific information

2. Reading for instructions

1. identify procedures and directions to be followed

3. Reading for concepts

1. understand cause and effect relationships
2. understand sequential and temporal relationships
3. understand general and technical concepts
4. understand physical principles

2. Critical Reading

1. Reading to infer meaning or to generalize

1. use context clues to determine the meaning of unfamiliar words
2. examine the structure of unfamiliar words
3. use the dictionary, glossary, etc.
4. extrapolate meaning
5. predict future events based upon facts given
6. extend applications from the facts given

2. Reading to detect fallacy

1. identify fallacious arguments
2. identify inconsistent facts
3. identify illogical conclusions
4. identify author bias

3. Reading to identify persuasive intent

1. by tone
2. by emotional words
3. by selective choice of information

3. WRITING

1. Mechanics

    1. Alphabetize

        1. Order information by the first, second or third word

    2. Capitalize

        1. Identify the words in sentences that should be capitalized

    3. Punctuate

        1. correctly use commas
        2. correctly use end marks
        3. correctly use the singular, plural, singular possessive or plural possessive forms of nouns

    4. Write legibly

        1. write clear enough to be understood

    5. Spell

        1. correctly spell common words so as to be understood

2. Word Selection

    1. Grammar

        1. correctly use regular verbs in context
        2. correctly use irregular verbs in context
        3. correctly use positive adjectives in context
        4. correctly use comparative adjectives in context
        5. correctly use superlative adjectives in context

    2. Diction

        1. correctly use technical vocabulary
        2. correctly use common vocabulary

3. Structure of Written Messages

1. Phrases and sentences and paragraphs
    1. correctly place modifiers
    2. differentiate between complete and incomplete sentences
    3. avoid nonparallel structure
    4. avoid verbosity
    5. use the most efficient and effective sequence or sentences for paragraphs

2. Forms, outlines, notes, memos, and letters

    1. construct messages using the standard format of an occupation

4. ORAL COMMUNICATION

1. Listening Comprehension

    1. Listening to comprehend the literal meaning of a message

        1. to obtain needed information (facts and figures)
        2. to identify procedures and directions to be followed
        3. to understand general and technical concepts

    2. Listening to infer meaning or to generalize

        1. use context clues to infer meaning of unknown words
        2. extrapolate meaning beyond facts given
        3. predict future events based on facts given
        4. extend applications from the facts given

    3. Listening to detect inconsistency, fallacy or persuasive intent

        1. identify fallacious arguments
        2. identify inconsistent facts
        3. identify illogical conclusions
        4. identify inappropriate body movements
        5. identify inconsistent tone of voice
        6. identify emotional words
        7. identify figurative language
        8. identify selective choice of information

2. Language Usage

    1. Speaking in face-to-face situations

        1. initiating conversation to seek or give information
        2. maintaining a conversation until information sought is received
        3. concluding a conversation

2. Speaking over the telephone

    1. use proper protocol in addressing the caller
    2. use the correct technique for placing calls
    3. use associate services such as operator, directory, etc.

3. Speaking with proper quality and delivery

    1. pronouncing words correctly and clearly
    2. using appropriate cadence and inflection
    3. use appropriate body movements and tone of voice
    4. choose appropriate words and avoid inappropriate words, slang, etc.

FIELD 3 -- MATERIAL TITLE

Entry may be up to 49 characters long, either alphabetic or numeric.

FIELD 4 -- AUTHOR (S)

Entry may be up to 30 characters long, either alphabetic or numeric.

FIELD 5 -- PUBLISHER

Entry may be up to 30 characters long, either alphabetic or numeric.

FIELD 6 -- DATE OF PUBLICATION

Entry may be up to 5 characters long, either alphabetic or numeric (i.e., 5-81, 5/81 or May 81).

FIELD 7 -- TYPE OF MATERIAL

Entry may be up to 30 characters long, either alphabetic or numeric. Commonly used descriptors are:

Text
Hard Text
Soft Text
Workbook
Paperback
Guide or Guidebook
Text/Workbook
Ditto Master
Transparency
Reel-to-Reel Tape
Super 8 Film
Film Loop
Computer Program
Game/Simulation
Machine
Inventory
Cassette Tape
Loop Tape
Record
Video Tape (1/2 in.)
Video Tape (3/4 in.)
Video Disc
Slide
Slide/Tape
Slide/Record
16mm Film
8mm Film
Computer Program
Kit
Test
Assessment Device

FIELD 8 -- LOCATION

Entry may be up to 49 characters long, either alphabetic or numeric. Could identify either sections of the book (i.e., pages 17-21) or location of the book (Resource Room C, West Plains Center Library, etc.)

APPENDIX B

FIELD 1 -- OCCUPATIONAL EDUCATION PROGRAM AREA

Entry must be a 5 character entry. -- ____.____.____ (Each period counts as a character)

The first blank is for major field: responses are numeric.

1 = Agricultural Education
2 = Distributive Education
3 = Health Occupations Education
4 = Home Economics Education
5 = Business and Office Education
6 = Technical Education
7 = Trade, Industrial or Service Occupations

The second blank is for program area within the occupational major field: responses are alphabetic.

1. AGRICULTURAL EDUCATION

A. Prevocational Studies in Agriculture
B. Agriculture Production
C. Agricultural Mechanics, Farm Mechanics
D. Ornamental Horticulture
E. Conservation
F. Agriculture Technology
G. Other Agriculture Program

2. DISTRIBUTIVE EDUCATION

A. Prevocational Studies in Distributive Education
B. Advertising Services and Sales
C. Apparel, Fashion Merchandising
D. Automotive, Petroleum, Service Station Management
E. Food Distribution and Production
F. General Merchandising and Sales, Wholesaling
G. Real Estate
H. Other Distributive Education Program

3. HEALTH OCCUPATIONS EDUCATION

A. Prevocational Studies in Health Education
B. Dental Assisting
C. Dental Lab Technology, Dental Lab Assisting
D. Medical Lab Assisting
E. Nursing, Licensed Practical
F. Nurse Assisting, Nurse Aide
G. Home Health Assisting
H. Medical Assisting (Office)
I. Other Health Occupation Program

4. HOME ECONOMICS EDUCATION

A. Prevocational Studies in Home Economics
B. Care and Guidance of Children
C. Clothing and Textiles, Clothing Management, Dry Cleaning, Upholstering, Textile Production and Fabrication
D. Food Services, Food Management, Quantity Food Occupations
E. Other Home Economics Program

5. BUSINESS AND OFFICE EDUCATION

A. Prevocational Studies in Business and Office Education
B. Bookkeeping and Accounting
C. Data Processing, Duplication
D. General Office Typing, Filing, Clerical
E. Stenographic and Secretarial
F. Supervision, Business Administration
G. Office-Related Technology
H. Other Business or Office Education Program

6. TECHNICAL EDUCATION

A. Prevocational Studies in Technical Fields
B. Architectural Technology, Drafting
C. Chemical Technology, Structure Drafting
D. Civil Technology, Structure Drafting
E. Electrical Technology
F. Electronic Technology, Computer Circuitry
G. Electro-Mechanical Technology
H. Mechanical Technology, Mechanical Design
I. Other Technical Education Program

7. TRADE, INDUSTRIAL OR SERVICE OCCUPATIONS

A. Prevocational Studies in this Area
B. Air Conditioning, Refrigeration, Heating
C. Appliance Repair
D. Auto Body and Fender Repair
E. Auto Mechanics-Diesel
F. Aviation Operations, Mechanics and Services
G. Commercial Arts, Advertising, Interior Decorating
H. Commercial Photography
I. Carpentry, Building Construction
J. Masonry, Bricklaying
K. Plumbing and Pipefitting
L. Glazing, Glass Repair or Replacement
M. Building Maintenance, Custodial Services
N. Drafting (Architectural, Electrical or Mechanical)
O. Electrical Occupations, Commercial or Residential
P. Electronics, Radio/TV Service, Industrial Electronics
Q. Graphic Arts, Offset Press, Litho Press, Printing
R. Maritime Occupations, Fisheries, Boat Building
S. Shop, Machine Tool Operators
T. Sheet Metal
U. Welding and Cutting Metals
V. Metalworking, Pattern Making
W. Cosmetology
X. Other Trade, Industrial or Service Occupation

The third blank is for the course number within the program area. These numbers are to be determined by the local educational center.

Examples

If the student was in Agricultural Mechanics I, the number would be:

Agricultural Education = 1
Agricultural Mechanics = C
Agricultural Mechanics I = 1

The appropriate number for this course would be 1.C.1

If the student was in Cosmetology II, the number would be:

Trade, Industrial or Service Occupations = 7
Cosmetology = W
Costmetology II = 2

The appropriate number for this course would be 7.W.2

If the student was Stenography, the number would be:

Business and Office Education = 5
Stenography = E
With no course number, the last number becomes 0

The appropriate number for this course would be 5.E.0

FIELD 2 -- TECHNICAL SKILLS

Entry may be up to six characters in length, numeric only.

You should develop a coding scheme for your school to identify those technical skill tasks that are taught in each course. The tasks should be numbered with the first tasks taught having lower numbers (such as 000001) and with the last tasks taught having the higher numbers (such as 999999). Tasks can be divided into units and modules with the first two digits representing the unit number, the second two representing the module number and the last two representing the specific task.

FIELD 3 -- MATERIAL TITLE

Entry may be up to 49 characters long, either alphabetic or numeric.

FIELD 4 -- AUTHOR(S)

Entry may be up to 30 characters long, either alphabetic numeric.

FIELD 5 -- PUBLISHER

Entry mayt be up to 30 characters long, either alphabetic or numeric.

FIELD 6 -- DATE OF PUBLICATION

Entry may be up to 5 characters long, either alphabetic or numeric (i.e., 5-81, 5/81 or May 81).

FIELD 7 -- TYPE OF MATERIAL

Entry may be used up to 30 characters long, either alphabetic or numeric. Commonly used descriptors are:

Text
Hard Text
Soft Text
Workbook
Paperback
Guide or Guidebook
Text/Workbook
Ditto Master
Transparency
Reel-to-Reel Tape
Super 8 Film
Film Loop
Computer Program
Game/Simulation
Machine
Inventory
Cassette Tape
Loop Tape
Record
Video Tape (1/2 in.)
Video Tape (3/4 in.)
Video Disc
Slide
Slide/Tape
Slide/Record
16mm Film
8mm Film
Computer Program
Kit
Test
Assessment Device

FIELD 8 — LOCATION

Entry may be up to 49 characters long, either alphabetic or numeric. Could identify either sections of the book (i.e., pages 17-21) or location of the book (Resource Room C, West Plains Center Library, etc.)

APPENDIX C

New York State College of Agriculture and Life Sciences
a Statutory College of the State University
Cornell University
Department of Education
Stone Hall
Ithaca, N. Y. 14853

Cornell Institute for Occupational Education
Telephone 607-256-6515

CIOE RETRIEVAL SYSTEM
for
Occupational Education/Basic Skills
Instructional Materials

CODING FORM

RECORD # _____

FIELD ENTRY NAME

1. OCCupational EDucation: ____.____.____ (1-7) (A-X) (1-9)

2. BASIC SKILLS: ____.____.____.____ (1-4) (0-9) (0-9) (0-99)

3. MATerial TITLE: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ (Maximum of 49 Characters)

4. AUTHOR(S): ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ (Maximum of 30 Characters)

5. PUBLISHER: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ (Maximum of 30 Characters)

6. DATE of PUBlication: ____ ____ ____ ____ ____ (Maximum of 5 Characters)

7. TYPE of MATerial: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ (Maximum of 30 Char.)

8. LOCATION: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
   ____ ____ ____ ____ (Maximum of 49 Characters)

Developed by the Cornell Institute for Occupational Education

APPENDIX D

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Ithaca, N. Y. 14853

Cornell Institute for Occupational Education
Telephone 607-256-6515

CIOE RETRIEVAL SYSTEM
for
TECHNICAL SKILLS
Instructional Materials

CODING FORM

RECORD #_____

FIELD ENTRY

1. OCCupational EDucation: ____ . ____ . ____
(1-7) (A-X) (1-9)

2. TECHnical SKILLS: _____
(0-999999)

3. MATerial TITLE: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ (Maximum of 49 Characters)

4. AUTHOR(S) ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ (Maximum of 30 Characters)

5. PUBLISHER: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ (Maximum of 30 Characters)

6. DATE of PUBlication: ____ ____ ____ ____ ____ (Maximum of 5 Characters)

7. TYPE of MATerial: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ (Maximum of 30 Characters)

8. LOCATION: ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
____ ____ ____ ____ (Maximum of 49 Characters)

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